Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Venous thromboembolism (VTE) diagnosis and treatment: percentage of patients with VTE who receive ongoing warfarin therapy with documentation in the medical record indicating a current INR is available and is used to monitor and adjust therapy.

Source(s)

Dupras D, Bluhm J, Felty C, Hansen C, Johnson T, Lim K, Maddali S, Marshall P, Messner P, Skeik N. Venous thromboembolism diagnosis and treatment. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2013 Jan. 90 p. [216 references]

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess percentage of patients age 18 years and older with venous thromboembolism (VTE) who receive ongoing warfarin therapy with documentation in the medical record indicating a current international normalized ratio (INR) is available and is used to monitor and adjust therapy.

Rationale

The priority aim addressed by this measure is to safely use anticoagulants to reduce the likelihood of patient harm and complications of anticoagulation therapy.

It is estimated that over one million patients are identified as having an acute venous thrombotic event in the United States annually. This includes patients with deep vein thrombosis and pulmonary embolism

and is estimated to result in more than 100,000 deaths each year.

A coordinated effort for follow-up of patients started on warfarin is required to minimize the risks of both hemorrhagic and thrombotic complications while on treatment. In the first several weeks of anticoagulation, international normalized ratios (INRs) need to be checked at least weekly.

A goal INR target of 2.5 is recommended for the majority of patients who are kept on long-term anticoagulation. Patients who have recurrent venous thromboembolism (VTE) on adequate anticoagulation with warfarin may require a higher target INR (e.g., 3.0).

Evidence for Rationale

Ansell JE, Hughes R. Evolving models of warfarin management: anticoagulation clinics, patient self-monitoring, and patient self-management. Am Heart J. 1996 Nov;132(5):1095-100. [42 references] PubMed

Dupras D, Bluhm J, Felty C, Hansen C, Johnson T, Lim K, Maddali S, Marshall P, Messner P, Skeik N. Venous thromboembolism diagnosis and treatment. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2013 Jan. 90 p. [216 references]

Ellis RF, Stephens MA, Sharp GB. Evaluation of a pharmacy-managed warfarin-monitoring service to coordinate inpatient and outpatient therapy. Am J Hosp Pharm. 1992 Feb;49(2):387-94. PubMed

Poller L, Wright D, Rowlands M. Prospective comparative study of computer programs used for management of warfarin. J Clin Pathol. 1993 Apr;46(4):299-303. PubMed

Primary Health Components

Venous thromboembolism (VTE); international normalized ratio (INR); warfarin therapy

Denominator Description

Number of patients age 18 years and older and diagnosed with venous thromboembolism (VTE) who receive ongoing warfarin therapy

Numerator Description

Number of patients age 18 years and older and diagnosed with venous thromboembolism (VTE) who receive ongoing warfarin therapy with documentation in the medical record indicating a current international normalized ratio (INR) is available and is used to monitor and adjust therapy

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Hospital Inpatient

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Clinical Practice or Public Health Sites

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

The time frame pertaining to data collection is monthly.

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Number of patients age 18 years and older and diagnosed with venous thromboembolism (VTE) who receive ongoing warfarin therapy

Exclusions
Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Number of patients age 18 years and older and diagnosed with venous thromboembolism (VTE) who receive ongoing warfarin therapy with documentation in the medical record indicating a current international normalized ratio (INR) is available and is used to monitor and adjust therapy

Exclusions
Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

Electronic health/medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Percentage of patients with venous thromboembolism (VTE) who receive ongoing warfarin therapy with documentation in the medical record, indicating a current international normalized ratio (INR) is available and is used to monitor and adjust therapy.

Measure Collection Name

Venous Thromboembolism Diagnosis and Treatment

Submitter

Institute for Clinical Systems Improvement - Nonprofit Organization

Developer

Institute for Clinical Systems Improvement - Nonprofit Organization

Funding Source(s)

The Institute for Clinical Systems Improvement's (ICSI's) work is funded by the annual dues of the member medical groups and five sponsoring health plans in Minnesota and Wisconsin.

Composition of the Group that Developed the Measure

Work Group Members: Denise Dupras, MD (*Work Group Leader*) (Mayo Clinic) (Internal Medicine); Terry A. Johnson, MD (Allina Medical Clinic) (Family Medicine); Nedaa Skeik, MD, FACP, FSVM, RPVI (Allina Medical Clinic) (Vascular Medicine); Seema Maddali, MD, MHA (HealthEast Care System) (Internal Medicine); Peter Marshall, PharmD (HealthPartners Health Plan) (Pharmacy); Cindy Felty, NP (Mayo Clinic) (Internal Medicine); Kaiser Lim, MD (Mayo Clinic) (Pulmonology); Penny Messner, DNP, RN, ACNS-BC (Mayo Clinic) (Vascular Medicine); Jim Bluhm, MPH (Institute for Clinical Systems Improvement) (Team Director); Carmen Hansen, BSN (Institute for Clinical Systems Improvement) (Project Manager)

Financial Disclosures/Other Potential Conflicts of Interest

The Institute for Clinical Systems Improvement (ICSI) has long had a policy of transparency in declaring

potential conflicting and competing interests of all individuals who participate in the development, revision and approval of ICSI guidelines and protocols.

In 2010, the ICSI Conflict of Interest Review Committee was established by the Board of Directors to review all disclosures and make recommendations to the board when steps should be taken to mitigate potential conflicts of interest, including recommendations regarding removal of work group members. This committee has adopted the Institute of Medicine Conflict of Interest standards as outlined in the report Clinical Practice Guidelines We Can Trust (2011).

Where there are work group members with identified potential conflicts, these are disclosed and discussed at the initial work group meeting. These members are expected to recuse themselves from related discussions or authorship of related recommendations, as directed by the Conflict of Interest committee or requested by the work group.

The complete ICSI policy regarding Conflicts of Interest is available at the ICSI Web site .

Disclosure of Potential Conflicts of Interest

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Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

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Research Grants: None
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Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2013 Jan

Measure Maintenance

Scientific documents are revised every 12 to 24 months as indicated by changes in clinical practice and literature.

Date of Next Anticipated Revision

The next scheduled revision will occur within 24 months.

Measure Status

This is the current release of the measure.

This measure updates a previous version: Institute for Clinical Systems Improvement (ICSI). Venous thromboembolism diagnosis and treatment. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jan. 96 p.

The measure developer reaffirmed the currency of this measure in January 2016.

Measure Availability

Source available from the Institute for Clinical Systems Improvement (ICSI) Web site.

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NQMC Status

This NQMC summary was completed by ECRI Institute on August 1, 2012.

This NQMC summary was updated by ECRI Institute on August 5, 2013.

The information was reaffirmed by the measure developer on January 13, 2016.

Copyright Statement

Production

Source(s)

Dupras D, Bluhm J, Felty C, Hansen C, Johnson T, Lim K, Maddali S, Marshall P, Messner P, Skeik N. Venous thromboembolism diagnosis and treatment. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2013 Jan. 90 p. [216 references]

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Readers with questions regarding measure content are directed to contact the measure developer.